



1 **Introduction**

2 **Q. Please state your name, position and business address.**

3 A. My name is Michael J. Majoros, Jr. I am Vice President of Snavelly King Majoros  
4 O'Connor & Lee, Inc. ("Snavelly King"), an economic consulting firm located at  
5 1220 L Street, N.W., Suite 410, Washington, D.C. 20005.

6 **Q. Please describe Snavelly King.**

7 A. Snavelly King was founded in 1970 to conduct research on a consulting basis into  
8 the rates, revenues, costs and economic performance of regulated firms and  
9 industries. The firm has a professional staff of 15 economists, accountants,  
10 engineers and cost analysts. Most of its work involves the development,  
11 preparation and presentation of expert witness testimony before Federal and  
12 state regulatory agencies. Over the course of its 33-year history, members of the  
13 firm have participated in more than 1,000 proceedings before almost all of the  
14 state commissions and all Federal commissions that regulate utilities or  
15 transportation industries.

16 **Q. Have you prepared a summary of your qualifications and experience?**

17 A. Yes. Appendix A is a summary of my qualifications and experience. It also  
18 contains a tabulation of my appearances as an expert witness before state and  
19 Federal regulatory agencies.

20 **Q. For whom are you appearing in this proceeding?**

21 A. I am appearing on behalf of the Vermont Department of Public Service ("VDPS").

22 **Q. What is the subject of your testimony?**

1 A. This testimony addresses depreciation.

2 **Q. Do you have any specific experience in the field of public utility**  
3 **depreciation?**

4 A. Yes. I and other members of my firm specialize in the field of public utility  
5 depreciation. We have appeared as expert witnesses on this subject before the  
6 regulatory commissions of almost every state in the country. I have testified in  
7 over one hundred proceedings on the subject of public utility depreciation and  
8 represented various clients in several other proceedings in which depreciation  
9 was an issue but was settled. I have also negotiated on behalf of clients in  
10 fifteen of the Federal Communications Commissions' ("FCC") Triennial  
11 Depreciation Represcription conferences.

12 **Q. Does your experience specifically include electric company depreciation?**

13 A. Yes. I have testified in thirty-one proceedings on the subject of electric company  
14 depreciation, and I have prepared testimony in seven electric proceedings in  
15 which depreciation was ultimately settled.

16 **Purpose of Testimony**

17 **Q. What is the purpose of your testimony?**

18 A. I have been asked to review the depreciation rates of Central Vermont Public  
19 Service Corporation ("CVPS" or "the Company"). I was asked to express an  
20 opinion regarding the reasonableness of the Company's depreciation rates and  
21 expense proposal and, if warranted, make alternative recommendations.

22

**CVPS's Depreciation-Related Proposal**

**Q. Will you please summarize the Company's depreciation proposal?**

A. Yes. Ms. Jean H. Gibson sponsors the Company's Depreciation Adjustment No. 13. Ms. Gibson's adjustment increases Rate Year depreciation expense for Test Year Plant in Service by \$121,779 from \$14,994,146 to \$15,115,925.<sup>1</sup>

**Q. Do you object to this proposal?**

A. Yes, I object to a portion of the proposal.

**Q. To what do you object?**

A. I object to Ms. Gibson's adjustments to the Hydro Production, Other Production and Transmission, Distribution and General functions' depreciation expense.

**Q. Does this mean that you agree with Ms. Gibson's Steam and Nuclear depreciation proposals?**

A. No. I am silent regarding Ms. Gibson's depreciation proposals for the Nuclear and Steam Production functions because these were not addressed in the Company's most recent Depreciation Study, which is the subject of my testimony.

**Q. Did CVPS submit its most recent Depreciation Study in this proceeding?**

A. No. The Company has not submitted a depreciation study in this case. Instead, CVPS proposes to use depreciation rates which were calculated by Mr. James Aikman in 2001. These rates were filed with, but never approved by this Board.

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<sup>1</sup> COS Adjustment No. 13, line 14.

1 **Q. Are you submitting CVPS's Depreciation Study as an Exhibit in this**  
2 **proceeding?**

3 A. Yes, I am. CVPS's most recent depreciation study is Exhibit\_\_\_\_(MJM-1). As  
4 indicated, the study was prepared by Mr. James H. Aikman of Management  
5 Applications Consulting, Inc. It was based upon Electric Plant in Services at  
6 December 21, 2000. CVPS implemented the new depreciation rates in its books  
7 on April 1, 2002.<sup>2</sup> It was submitted to the Board on April 12, 2002, but no related  
8 Order has been issued.<sup>3</sup> The study apparently resulted in a depreciation  
9 expense reduction.

10 **Summary and Conclusions**

11 **Q. What is your opinion regarding the Company's depreciation proposal?**

12 A. Although the Company's Depreciation Study apparently resulted in a  
13 depreciation expense decrease when it was implemented, the underlying rates  
14 continue to be excessive. They have been, and continue to be, generating  
15 Regulatory Liabilities ("amounts owed") to ratepayers. This fact is corroborated  
16 by CVPS's reclassification of \$4.3 million from accumulated depreciation to  
17 regulatory liabilities in its 2002 Form 10K. This amount grew to \$5.2 million in the  
18 2003 Form 10K.

19 **Q. Why are CVPS's depreciation rates excessive?**

20 A. They are excessive for two reasons. First, in my opinion, based upon my  
21 analyses, several of the average lives upon which the account depreciation rates

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<sup>2</sup> Response to DPS DR Q 7-34.

1 are based are too short. This results in overstated depreciation rates for those  
2 accounts. I am not proposing alternative lives here, because I do not have  
3 sufficient data and information to conduct a complete depreciation study for all  
4 accounts. Therefore, I merely point this out, and anticipate that the situation will  
5 be resolved in the next depreciation study.

6 CVPS's depreciation rates are also excessive because future net salvage  
7 is bundled into those depreciation rates, even though the Company does not  
8 have any obligation or liability to incur these costs. At a minimum, CVPS's  
9 current rates are inconsistent with the transparency provided by a "separation  
10 principle" reflected in current GAAP and regulatory accounting rules. As  
11 indicated earlier the Company's study is relatively old, i.e., it is based on  
12 December 31, 2000 plant values. Certain major accounting changes have  
13 occurred since that study was conducted.

14 Current GAAP accounting rules require that future negative salvage  
15 amounts be identified as Regulatory Liabilities ("amounts owed") to ratepayers as  
16 CVPS has properly reported in its more recent Form 10Ks. Current regulatory  
17 accounting rules require that future negative net salvage amounts, which have  
18 been identified as "non-legal asset retirement obligations," be specifically  
19 identified in separate sub-accounts within depreciation expense and accumulated  
20 depreciation. The Company's Depreciation Study does not comply with these  
21 new accounting rules because it was conducted in 2001, before the new rules

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<sup>3</sup> Response to DPS DR Q 1-67.

1 took effect. Nevertheless, CVPS recognizes and specifically addresses the new  
2 rules in the Form 10Ks and as a result of those rules, the Regulatory Liabilities  
3 have now been identified, and they are growing. This will be discussed in much  
4 more detail later in this testimony.

5 **Current Rates**

6 **Q. How were CVPS's depreciation rates calculated?**

7 A. The Company calculated straight-line remaining life depreciation rates.

8 **Q. When were the Company's present depreciation rates approved?**

9 A. As stated above, CVPS's present depreciation rates were never formally  
10 approved by the Public Service Board. Data Request No. 7-36 asked "Pursuant  
11 to what regulatory authority did CVPS implement the December 31, 2000  
12 Depreciation Study rates?" CVPS responded:

13 The Company undertakes a depreciation study every  
14 five to six years at the recommendation of the FERC.  
15 A strong correlation to undertaking a depreciation  
16 study is to actually implement it. Since the primary  
17 jurisdiction of the Company is Vermont, the Board  
18 would have the authority to implement. The Company  
19 discussed the implementation of the depreciation  
20 study with Ennis Gidney, Hearing Examiner of the  
21 Board staff, and, pursuant to his recommendation,  
22 filed the depreciation study by letter dated April 12,  
23 2002 with copies to the VDPS. The Company did not  
24 subsequently receive a response from either the  
25 Board or the VDPS on the depreciation study.

26  
27 The April 12, 2002 filing letter was provided in response to Data  
28 Request No. 1-67.

29

1 **Depreciation Concepts**

2 **Q. Will you please provide a brief fundamental discussion of depreciation?**

3 A. Yes. I will start with a discussion of plant additions, retirements and balances.

4 **Q. What are plant additions, retirements and balances?**

5 A. Public utilities record their plant investment activity in the individual plant  
6 accounts set-forth in the Federal Energy Regulatory Commission's ("FERC")  
7 Uniform System of Accounts ("USOA"). Additions, retirements and balances  
8 refer to individual accounts: 331-Structures and Improvements, for example. An  
9 annual addition is the original cost of plant added to the account during the year.  
10 An annual retirement is the original cost of a prior addition which is now removed  
11 from service. The plant balance is what is left.

12 **Q. What is depreciation expense?**

13 A. In summary, depreciation expense is a charge to operating expense to reflect the  
14 recovery of a company's previously expended capital. Public utility depreciation  
15 expense is typically straight-line over service life which results in an equal share  
16 of the cost of assets being assigned or allocated to expense each year over the  
17 service life of the assets. A service life is the period of time during which  
18 depreciable plant [and equipment] is in service.<sup>4</sup> Annual depreciation expense is  
19 a cost included in a public utility's revenue requirement.

20 **Q. How is the annual depreciation expense calculated?**

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<sup>4</sup> Public Utility Depreciation Practices, August, 1996. National Association of Regulatory Utility Commissioners ("NARUC Manual"), p. 321.

1 A. Annual depreciation expense is calculated by applying a depreciation rate to  
2 plant balances. The resulting expense (also called accrual) is charged, just as  
3 any other expense, to the revenue requirement and from there it is charged to  
4 the utility's customers.

5 **Q. Is it true that depreciation is a non-cash expense?**

6 A. Yes. Depreciation is a non-cash expense in contrast to payroll expense, for  
7 example, which involves the current outlay of cash. That is, depreciation  
8 expense does not involve a specific payment during the test-year. Both  
9 depreciation and payroll are included as expenses in the income statement and  
10 revenue requirement, but no cash flows out of the company for depreciation  
11 expense. Instead of reducing the cash account, depreciation expense is  
12 recorded on the income statement as an expense and simultaneously recorded  
13 on the balance sheet in the accumulated depreciation account; which is shown  
14 as an offset to plant in service.

15 **Q. What is the accumulated depreciation account?**

16 A. Accumulated depreciation (hereinafter called reserve or accumulated  
17 depreciation) is, in essence, a record of the previously recorded depreciation  
18 expense. At any point in time, the accumulated depreciation account represents  
19 the net accumulated amount of the original cost of assets and net salvage that  
20 has been recovered to date. It can be considered a measure of the depreciation  
21 recovered from ratepayers.

1 **Q. Does the fact that depreciation is a non-cash expense render it any less**  
2 **legitimate than any other expense?**

3 A. Depreciation is a legitimate expense, but it is a major expense based on a  
4 substantial amount of judgment and complex analytical procedures, and it drives  
5 utility prices. Therefore, the measurement of depreciation and the calculation of  
6 the expense warrant careful regulatory consideration and scrutiny.

7 **Q. What is the objective of depreciation expense?**

8 A. From a regulator's perspective, the objective of public utility depreciation is  
9 straight-line capital recovery. As stated above, this is accomplished by allocating  
10 the original cost of assets to expense over the lives of those assets through the  
11 application of depreciation rates to plant balances.

12 **Q. What are the fundamental parameters underlying CVPS's depreciation**  
13 **rates?**

14 A. CVPS's depreciation rates are founded upon three fundamental parameters: a  
15 service life, a dispersion pattern and a net salvage ratio. As mentioned above,  
16 CVPS used the remaining life technique to compute the rates.

17 **Q. Would you please explain how CVPS's rates were calculated?**

18 A. Yes. In order to understand remaining life depreciation, it is useful to first  
19 address whole-life depreciation.

20 **Q. Please explain the whole-life technique.**

21 A. The following calculation shows a straight-line whole-life depreciation rate  
22 assuming a 10-year average service life.

**Table 1**

**Straight-Line Whole-Life Depreciation Rate  
Assuming 10-Year Life**

$$\frac{100\%}{10 \text{ yrs.}} = 10.0\%$$

Each year the 10.0 percent depreciation rate would be applied to plant in service to produce an annual depreciation expense.

**Q. What happens at the end of an asset's life under this scenario?**

A. All things equal, at the end of 10 years, the plant balance will be 100%, and the depreciation reserve balance will be 100%. This equality is important to an understanding of certain issues in this case.

**Q. What happens if you include net salvage in the calculation?**

A. A central issue in this case is negative net salvage. I will, therefore, use negative net salvage as an example. Negative net salvage is the net cost of removal of the asset after completion of its service life. For the remainder of the testimony I use the terms negative net salvage, decommissioning and cost of removal interchangeably. Assume a negative 5 percent (-5%) net salvage ratio. The equation above with a value for negative net salvage is as follows:

**Table 2**

**Straight-Line Whole-Life Depreciation Rate  
Assuming 10-Year Life and -5% Net Salvage**

$$\frac{100\% - (-5\%)}{10 \text{ yrs.}} = 10.5\%$$

Negative net salvage increases the resulting whole-life depreciation rate from 10.0% to 10.5%.

**Q. Why does negative net salvage increase the depreciation rate?**

A. It increases the depreciation rate because negative salvage is, in effect, added to the original cost of the plant. Instead of 100% (which represents the original cost of assets), the numerator becomes 105%. This is equivalent to capitalizing or adding the estimated cost of removal to the original cost of the asset.

**Q. What happens at the end of life under this scenario?**

A. The plant balance will be 100% but the reserve will be 105%. In other words, unlike the “zero net salvage scenario” in Table 1; when negative net salvage is included in a depreciation rate there will not be an equality of plant and reserve at the end of an asset’s life because the Company will have charged more depreciation than it paid for the original cost of the asset. Under these circumstances, equality will only be achieved if the Company actually spends additional money at the end of the asset’s life.

**Q. Is the Company required to spend the money at the end of life?**

A. No, CVPS is not required to spend the money unless it has a legal liability to spend the money.

**Q. Will the money be available to spend, i.e., can the Company merely take the money out of accumulated depreciation if it is required to spend the money?**

A. No. Accumulated depreciation is an “unfunded account.” Even though the Company collected an excess amount in the past, it will have already spent that money on whatever it chose in the past: salaries, dividends, etc.

**Q. Please explain the remaining life technique.**

A. The remaining life technique is similar to the whole-life technique, but it incorporates accumulated depreciation into the numerator of the equation, and the denominator becomes the remaining life rather than the whole life of the asset.

**Q. What happens when accumulated depreciation is incorporated into the numerator of the basic depreciation calculation?**

A. If the hypothetical 10-year asset is 3 years old, its remaining life would be 7 years ( $10 - 3 = 7$ ). The accumulated depreciation account would be 31.5 percent of the original cost because the 10.5 percent depreciation rate from Table 2 would have been applied for three years ( $3 \times 10.5\% = 31.5\%$ ). The remaining life depreciation rate would then be calculated as follows:

**Table 3**

**Straight-Line Remaining Depreciation Life Rate  
Assuming 10-year Life, 7-year Remaining Life  
And -5% Net Salvage**

$$\frac{100\% - (-5\%) - 31.5\%}{7 \text{ years}} = 10.5\%$$

1 **Q. Please explain why the whole-life depreciation rate in the Table 2 example**  
2 **and the remaining life depreciation rate in the Table 3 example are both**  
3 **10.5 percent?**

4 A. In these examples, the remaining life depreciation rate and the whole-life  
5 depreciation rates are the same (10.5 percent), because I have assumed that the  
6 accumulated depreciation account is in balance. In other words, based on a  
7 continuation of the fundamental parameters, i.e., the 10-year service life and the  
8 negative 5 percent net salvage ratio, exactly the right amount of depreciation  
9 (31.5 percent) has been charged and collected in the past,

10 **Q. What would happen if either of these fundamental parameters were to**  
11 **change?**

12 A. If either the service life or net salvage parameter changes during the life of the  
13 plant, the accumulated depreciation account will be out of balance, and the  
14 remaining life rate will be either higher or lower than whole-life rate depending on  
15 the direction of the imbalance. That is because the Company will have collected  
16 either too much depreciation or not enough depreciation in the past, given the  
17 current estimates of lives or future net salvage.

18 The difference between the actual amount recovered, as included in the  
19 book depreciation reserve, and a theoretical estimate of what should be in the  
20 book reserve, is called a “reserve imbalance.” The remaining life technique is  
21 often used to deal with such reserve imbalances.

22 **Q. Is there anything unique about public utility depreciation?**

1 A. Yes. There are several unique factors driving public utility depreciation rates.  
2 First, public utility depreciation is based on a “group life” as opposed to the lives  
3 of individual assets. Second, the cost of removing or disposing of an asset that  
4 is retired from service is charged to the accumulated depreciation reserve, as  
5 opposed to being recognized as an operating expense in the year incurred.  
6 Third, the original cost of a retired asset is also recorded in the accumulated  
7 depreciation reserve, as opposed to being written off in the year of the asset’s  
8 retirement/disposal. Fourth, in certain jurisdictions public utility depreciation  
9 rates incorporate net salvage factors as discussed above. This is not the case  
10 for unregulated entities. Each of these factors affects the depreciation rates that  
11 are ultimately determined for the group of assets that are recorded in plant  
12 accounts designated by the FERC Uniform System of Accounts (“USOA”).

13 **Q. Please explain the concept of group life depreciation.**

14 A. Depreciation expense is one of the primary cost drivers of public utility revenue  
15 requirement calculations because these companies are capital intensive. An  
16 excessive depreciation rate can unreasonably increase the utility’s revenue  
17 requirement and resulting service rates; thereby unnecessarily charging millions  
18 of dollars to a utility’s customers.

19 Utilities are “capital intensive.” They own thousands of assets,  
20 represented by millions of dollars of investment. Given the capital intensity of the  
21 industry, it is very difficult to track and depreciate every single asset that a utility  
22 owns. Public utility depreciation is, therefore, based on a group concept, which

1 relies on averages of the service lives and remaining lives of the assets within a  
2 specific group.

3 These factors are necessarily estimates of the average service lives and  
4 average remaining lives of groups of assets. These estimates are in turn based  
5 on complex analytical procedures which involve not only the age of existing and  
6 retired assets, but also retirement dispersion patterns called “Iowa curves.”

7 I will discuss all of these in more detail later in my testimony. The  
8 important point to remember is that service life, average age and Iowa curves are  
9 all used in the estimation of an average service life and average remaining life of  
10 a group of assets and are ultimately used to calculate the depreciation rate for  
11 that group of assets.

12 **Q. Would you please relate these fundamentals to the issues in this**  
13 **proceeding?**

14 A. Yes. In depreciation analysis it is axiomatic that the shorter the life, the higher  
15 the resulting depreciation rate. If CVPS’s depreciation rates are based on lives  
16 which are too short, the depreciation rates will be too high. What if the 10-year  
17 life I used in the earlier examples really should have been 30 years? For  
18 example, assume that the analyst conducted statistical analyses which indicated  
19 that the average life is actually 30 years. The following table shows the impact of  
20 continuing to use a shorter life.

21

**Table 4**

**Impact of Reducing a Life From 30 Years to 10 Years**

$$30 \text{ year life} = 100\%/30 = 3.3\%$$

$$10 \text{ year life} = 100\%/10 = 10.0\%$$

If the life should have been 30 years, the rate should have been 3.3 percent rather than the 10 percent depreciation rate based on a 10 year life. The shorter the life, the higher the rate. If the life is too short, the resulting rate is obviously excessive.

**Q. Are there any other factors that cause CVPS's depreciation rates to be excessive?**

A. Yes, many of CVPS's proposed depreciation rates contain negative net salvage factors which charge too much for future cost of removal because they are too negative. They result in excessive depreciation rates. The next table shows the impact on depreciation rates of increasing the cost of removal ratio.

**Table 5**

**Impact of Increasing Cost of Removal Ratio**

$$-5\% \text{ ratio} = 100 \% - (-5)/30 = 3.5 \%$$

$$-50\% \text{ ratio} = 100 \% - (-50)/30 = 5.0 \%$$

Increasing a cost of removal ratio from -5% to -50% increases the depreciation rate from 3.5% to 5.0%. If the estimated -50% cost of removal ratio is not supportable, obviously, the resulting 5.0% depreciation rate is excessive. The

1 combination of these two factors, i.e., understated lives and overstated cost of  
2 removal ratios, compounds the excessive depreciation rate problem.

3 **Excessive Depreciation**

4 **Q. What is an excessive depreciation rate?**

5 A. An excessive depreciation rate is one that produces depreciation expense which  
6 is more than necessary to return a company's capital investment over the life of  
7 the asset.

8 **Q. Have any courts addressed the concept of excessive depreciation?**

9 A. Yes, the concept of excessive depreciation was explained by the U.S. Supreme  
10 Court in a landmark 1934 decision, Lindheimer v. Illinois Bell Telephone  
11 Company, as follows:

12 If the predictions of service life were  
13 entirely accurate and retirements were made  
14 when and as these predictions were precisely  
15 fulfilled, the depreciation reserve would  
16 represent the consumption of capital, on a cost  
17 basis, according to the method which spreads  
18 that loss over the respective service periods.  
19 But if the amounts charged to operating  
20 expenses and credited to the account for  
21 depreciation reserve are excessive, to that  
22 extent subscribers for the telephone service  
23 are required to provide, in effect, capital  
24 contributions, not to make good losses incurred  
25 by the utility in the service rendered and thus to  
26 keep its investment unimpaired, but to secure  
27 additional plant and equipment upon which the  
28 utility expects a return.

29  
30 Confiscation being the issue, the  
31 company has the burden of making a  
32 convincing showing that the amounts it has  
33 charged to operating expenses for depreciation

1           have not been excessive. That burden is not  
2           sustained by proof that its general accounting  
3           system has been correct. The calculations are  
4           mathematical, but the predictions underlying  
5           them are essentially matters of opinion. They  
6           proceed from studies of the “behavior of large  
7           groups” of items. These studies are beset with  
8           a host of perplexing problems. Their  
9           determination involves the examination of  
10          many variable elements and opportunities for  
11          excessive allowances, even under a correct  
12          system of accounting, are always present. The  
13          necessity of checking the results is not  
14          questioned. The predictions must meet the  
15          controlling test of experience.<sup>5</sup>  
16

17   **Q.     Are you providing this as a legal opinion?**

18   A.     No. I am not a lawyer, but I provide this to illustrate that the concept of an  
19          excessive depreciation rate is not new.

20   **Q.     What is the effect of an excessive depreciation rate?**

21   A.     Excessive depreciation rates produce excessive depreciation expense. In other  
22          words, if an excessive depreciation rate is applied to the plant balance, it results  
23          in excessive depreciation expense. Since depreciation expense flows dollar-for-  
24          dollar into the revenue requirement, excessive depreciation expense results in an  
25          excessive revenue requirement.

26   **Q.     Who pays for excessive depreciation rates?**

27   A.     Ratepayers pay for excessive depreciation rates.

28   **Q.     What is the result?**

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<sup>5</sup> Lindheimer v. Illinois Bell Telephone Company, 292 U.S. 151, 168-170, 54 S.Ct. 658, 665-666 (1934).  
(Emphasis added; footnote deleted.)

1 A. As the U.S. Supreme Court said, the result was the extraction of capital  
2 contributions from ratepayers, which the Court decided was inappropriate.  
3 Current GAAP accounting rules highlight these amounts associated with negative  
4 net salvage and require that they be reported as Regulatory Liabilities (“amounts  
5 owed”) to ratepayers.

6 **Net Salvage**

7 **Q. What is net salvage?**

8 A. Plant and equipment are retired from service at the end of their useful life.  
9 Sometimes the retired plant and equipment may be physically removed and can  
10 be resold for value. This is called gross salvage. The cost of removal net of the  
11 value received for the salvage constitutes net salvage. In more technical terms,  
12 gross salvage is the amount recorded for the property retired due to the sale,  
13 reimbursement, or reuse of the property. Cost of removal is the cost incurred in  
14 connection with the retirement from service and the disposition of depreciable  
15 plant.<sup>6</sup> As discussed above, net salvage is the difference between gross salvage  
16 and cost of removal.

17 **Q. Are net salvage ratios included in the Company’s depreciation rate**  
18 **calculations?**

19 A. Yes. Negative net salvage ratios are included in several of CVPS’s depreciation  
20 rates. As explained in the depreciation concepts section of this testimony,  
21 negative future net salvage ratios increase depreciation rates.

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<sup>6</sup> NARUC Manual, pages 320 and 317.

1   **Q.    Is net salvage a significant issue in this proceeding?**

2    A.    Yes, it is.

3   **Q.    Please explain why net salvage is a significant issue in this proceeding.**

4    A.    It is significant because CVPS has bundled inflated cost of removal factors in the  
5       depreciation rates. The result is that current ratepayers are paying for future  
6       inflation to costs which, to my knowledge, the Company has no legal liability to  
7       incur. Based on plant investment as of December 31, 2000, CVPS's net salvage  
8       ratios result in cost of removal charges to ratepayers of at least \$1.6 million per  
9       year. This amount increases with increases in investment, hence, it is even  
10      larger today. Ironically, even though the liability to ratepayers resulting from the  
11      collection of future negative net salvage is increasing, my analysis shows that the  
12      Company on average has actually experienced \$0.5 million in **positive** net  
13      salvage per year.<sup>7</sup>

14   **Q.    Do you agree with the inclusion of net salvage ratios in the depreciation**  
15      **rates?**

16   A.    No, I do not. In my opinion, CVPS's depreciation rates are inconsistent with the  
17      implementation and consequences of the Financial Accounting Standards  
18      Board's ("FASB") Statement of Financial Accounting Standard No. 143 ("SFAS  
19      No. 143") and the Federal Energy Regulatory Commission's ("FERC") Order No.  
20      631. While these pronouncements provide an exception to the general rules for  
21      utilities, at a minimum, these new accounting rules require a specific and

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<sup>7</sup> See Exhibit\_\_\_\_(MJM-3), Statement D.

1 separate identification of any cost of removal charges to ratepayers both in rate  
2 cases as well as in financial statements to stockholders.

3 In order to fully address the net salvage issue, I will approach it in the  
4 following manner. First I will address SFAS No. 143 and asset retirement  
5 obligations. This will be followed by a discussion of FERC Order No. 631.  
6 Finally, I will discuss the net salvage ratios included in CVPS's depreciation  
7 rates.

8 **Financial Accounting Standards Board's Statement of Financial Accounting**  
9 **Standard No. 143**

10  
11 **Q. What is the Financial Accounting Standards Board?**

12 A. The Financial Accounting Standards Board ("FASB") is a standards-setting body  
13 for the public accounting profession.

14 **Q. What is SFAS No. 143?**

15 A. SFAS No. 143 is a June 2001 FASB pronouncement concerning the appropriate  
16 accounting for long-lived assets. It is effective for all fiscal years beginning after  
17 June 15, 2002. However, earlier application was encouraged. Pursuant to SFAS  
18 No. 143 all companies, both unregulated (e.g. General Motors) and regulated  
19 (e.g. CVPS) must review all of their long-lived assets to determine whether or not  
20 they have actual legal obligations to remove retired assets. For some plant and  
21 equipment, companies have a legal obligation to remove the asset at the end of  
22 the service life. These legal obligations for future removal are called asset  
23 retirement obligations ("AROs"). For other assets, no such obligation exists.

1           If a company does have an ARO, the fair value of the future retirement  
2 cost, which is determined using net present value techniques, is considered to be  
3 part of the original cost of the asset. It is, therefore, capitalized (included in the  
4 original cost) and depreciated over the life of the asset. Hence, for assets with  
5 AROs, the accumulated depreciation account would equal the plant balance at  
6 the end of the asset's life, because total depreciation would equal the total  
7 recorded cost (initial cost plus capitalized ARO) at the end of the asset's life.

8           If, however, a company does not have such legal obligations, the future  
9 cost of removal will not be capitalized and will not be included in depreciation  
10 expense. Therefore, for assets without AROs, at the end of the asset's life, the  
11 accumulated depreciation account will equal the plant balance because only the  
12 initial cost of the asset will have been depreciated. In other words, there is  
13 symmetry between assets with and without AROs. In both cases, the  
14 accumulated depreciation will equal the original cost of the asset at the end of its  
15 life.

16 **Q. Is there a label that we can apply to this approach to make it more**  
17 **understandable?**

18 A. Yes. We can call this the "liability approach." Under the liability approach, if you  
19 incur a liability (amount owed) you have also incurred a cost. If you have not  
20 incurred a liability, you have not incurred a cost. Therefore, if a Company incurs  
21 a legal liability to spend money to remove an asset at the end of its life, that  
22 liability is part of the cost of the asset. If a Company does not have a legal

1 liability to spend money to remove an asset at the end of its life, then it has not  
2 incurred a cost and may not add any additional amount to the initial asset cost.

3 **Q. How are AROs measured?**

4 A. AROs are measured at their net present value, not their inflated future value.

5 **Q How are AROs recorded on the books?**

6 A. As stated above, AROs are capitalized as a cost of the related asset and  
7 concomitantly recorded as a liability for those companies with a legal obligation  
8 to remove a retired asset. Each year, as the liability increases due to inflation,  
9 the increase is charged to accretion expense and credited to the liability, but the  
10 asset value remains the same. In other words, just as the original cost of the  
11 asset does not increase, neither does the capitalized asset retirement cost.

12 **Q. What happens if a company does not have an asset retirement obligation**  
13 **pursuant to SFAS No. 143?**

14 A. As explained above, if a company does not have such obligations, the future cost  
15 of removal is not considered as a cost of the asset, and therefore it will not be  
16 included in the company's depreciation expense on its general purpose financial  
17 statements. SFAS No. 143, therefore, unbundles net salvage from depreciation  
18 rates. It does this in two ways. Either by incorporating the net present value of  
19 an ARO in the cost of the asset, or by excluding non-AROs from the depreciation  
20 rate calculations.

21 **Q. What is the accounting impact of SFAS No. 143 for electric utilities?**

1 A. Under Generally Accepted Accounting Principles (“GAAP”), electric utilities are  
2 required to review all of their assets to determine if they have any AROs. If yes,  
3 they are capitalized accordingly. Paragraph B73 of SFAS No. 143 provides an  
4 exception for regulated utilities, which allows them to continue to incorporate net  
5 salvage factors (“non-legal AROs”) in depreciation rates even if they do not have  
6 AROs. The quid pro quo, however, is that the utilities are also required to  
7 determine the amount of any prior cost of removal collections relating to non-  
8 AROs that is now included in their accumulated depreciation accounts, and  
9 reclassify these and any such future charges as a regulatory liability to  
10 ratepayers. In other words, even with the paragraph B73 exception, SFAS No.  
11 143 provides transparency through reporting disclosure requirements.

12 **Q. Has CVPS implemented SFAS No. 143?**

13 A. Yes. The Company implemented SFAS No. 143 on January 1, 2003.<sup>8</sup>

14 **Q. Does the Company have any asset retirement obligations (AROs) pursuant**  
15 **to SFAS No. 143?**

16 A. Yes. “The Company has legal retirement obligations associated with the  
17 decommissioning related to its investments in nuclear plants.”<sup>9</sup> The Company’s  
18 Depreciation Study did not address nuclear plant, hence it is not discussed in my  
19 testimony. CVPS does not appear to have any other legal asset retirement  
20 obligations.

21 **Q. Has CVPS recorded any impacts related to SFAS No. 143 on its books?**

---

<sup>8</sup> Central Vermont Public Service Corporation, December 31, 2003 Form 10K Report, page 59.

1 A. Yes. The Company's December 31, 2003 Form 10K Report states "The  
2 Company had about \$3.4 million of asset retirement obligations recorded on the  
3 Consolidated Balance Sheet at December 31, 2003."<sup>10</sup> Regarding non-legal  
4 removal costs, the Company states:

5 The Company's regulated operations collect removal  
6 costs in rates for certain utility plant assets that do not  
7 have associated legal asset retirement obligations.  
8 Non-legal removal costs of about \$5.2 million in 2003  
9 and \$4.3 million in 2002 were previously recorded in  
10 Accumulated Depreciation. These regulatory  
11 liabilities have been reclassified to Deferred Credits  
12 and Other Liabilities on the Consolidated Balance  
13 Sheets.<sup>11</sup>  
14

15 The \$4.3 million regulatory liability to ratepayers recorded in 2002 grew to  
16 \$5.2 million in 2003, i.e., by \$0.9 million or 21 percent. This has the potential to  
17 be an explosive situation, and at some point, both ratepayers as well as  
18 stockholders would, in my opinion, have a legitimate right to ask what the amount  
19 is, and why it continues to grow.

20 **FERC Order No. 631**

21 **Q. What is the impact of SFAS No. 143 on electric regulatory accounting?**

22 A. The impact on regulatory accounting for electric utilities is that SFAS No. 143  
23 evolved into FERC Order No. 631 in Docket RM02-7-000. FERC Order No. 631  
24 resulted in changes to the USOA to incorporate the principles of SFAS No. 143.

25 **Q. How did SFAS No. 143 evolve into FERC Order No. 631?**

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<sup>9</sup> Central Vermont Public Service Corporation, December 31, 2003 Form 10K Report, page 59.

<sup>10</sup> Id.

<sup>11</sup> Id.

1 A. SFAS No. 143 was initiated in 1994 as a result of a request by the Edison  
2 Electric Institute. Subsequent to that initiation, the accounting community went  
3 through several iterations of proposals and comments to finally arrive at SFAS  
4 No. 143. FERC established Docket No. RM02-7-000 as a result of SFAS No.  
5 143. The FERC proceeding included a Technical Conference, Comments, a  
6 Notice of Proposed Rulemaking (“NOPR”), Additional Comments and ultimately,  
7 Order No. 631, on April 9, 2003. Exhibit\_\_\_\_(MJM-2) is a document I wrote to  
8 track the progress of SFAS No. 143 into FERC Order No. 631. It addresses net  
9 salvage as it relates to non-ARO assets, since that is the subject in dispute.

10 **Q. What is the thrust of Order No. 631?**

11 A. Order No. 631 essentially adopts SFAS No. 143 and then integrates it into the  
12 Uniform System of Accounts.

13 **Q. Does Order No. 631 require electric utilities to review their long-lived assets**  
14 **to determine whether they have any AROs?**

15 A. Yes. Order No. 631 adopts SFAS No. 143, which already obligates electric  
16 utilities, among others, to review their long-lived assets to determine if they have  
17 any AROs.

18 **Q. Is the review required by Order No. 631 the same as the review CVPS**  
19 **already conducted under SFAS No. 143 in which it determined that it has**  
20 **AROs for some of its Nuclear plant?**

21 A. Yes, it is.

1 **Q. What does Order No. 631 require in situations where electric utilities do not**  
2 **have AROs?**

3 A. Any charges for such amounts must be separately identified. FERC Order No.  
4 631 defines cost of removal allowances for which there is no legal asset  
5 retirement obligation, as “non-legal retirement obligations.” Past and future “non-  
6 legal AROs” must be specifically identified and accounted for separately in the  
7 depreciation studies, depreciation expense and the accumulated depreciation  
8 account.

9 In Order No. 631, FERC maintains the transparency resulting from the  
10 “separation principle” for non-legal AROs that was established in paragraph B73  
11 of SFAS No. 143. FERC explains its new requirements for non-legal AROs, as  
12 follows:

13 Instead, we will require jurisdictional entities to  
14 maintain separate subsidiary records for cost of  
15 removal for non-legal retirement obligations that  
16 are included as specific identifiable allowances  
17 recorded in accumulated depreciation in order to  
18 separately identify such information to facilitate  
19 external reporting and for regulatory analysis,  
20 and rate setting purposes. Therefore, the  
21 Commission is amending the instructions of  
22 accounts 108 and 110 in Parts 101, 201 and  
23 account 31, Accrued depreciation - Carrier  
24 property, in Part 352 to require jurisdictional  
25 entities to maintain separate subsidiary records  
26 for the purpose of identifying the amount of  
27 specific allowances collected in rates for non-  
28 legal retirement obligations included in the  
29 depreciation accruals.<sup>12</sup>

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<sup>12</sup> FERC Docket No. RM02-7-000, Order No. 631, Issued April 9, 2003, Paragraph 38. (Emphasis added.)

1  
2 **Q. Does FERC provide any additional insight as to the interpretation of these**  
3 **new rules?**

4 A. Yes, FERC also states:

5  
6 Jurisdictional entities must identify and quantify  
7 in separate subsidiary records the amounts, if  
8 any, of previous and current accumulated  
9 removal costs for other than legal retirement  
10 obligations recorded as part of the depreciation  
11 accrual in accounts 108 and 110 for public  
12 utilities and licensees, account 108 for natural  
13 gas companies, and account 31 for oil pipeline  
14 companies. If jurisdictional entities do not have  
15 the required records to separately identify such  
16 prior accruals for specific identifiable allowances  
17 collected in rates for non-legal asset retirement  
18 obligations recorded in accumulated  
19 depreciation, the Commission will require that  
20 the jurisdictional entities separately identify and  
21 quantify prospectively the amount of current  
22 accruals for specific allowances collected in rates  
23 for non-legal retirement obligations."<sup>13</sup>  
24

25 **Q. Does FERC make any policy calls concerning the appropriate treatment of**  
26 **the disposition of prior and future collections contained in these separate**  
27 **allowances?**

28 A. No. FERC declines to make such calls on a policy basis. FERC will resolve the  
29 appropriate treatment of the dispositions of prior and future collections on a case-  
30 by-case basis. Specifically, FERC states:

31  

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<sup>13</sup> Id., Paragraph 39. (Emphasis added.)

1 "The Commission will decline to make policy  
2 calls concerning regulatory certainty for  
3 disposition of transition costs, external funds for  
4 amounts collected in rates for asset retirement  
5 obligations, adjustments to book depreciation  
6 rates, and the exclusion of accumulated  
7 depreciation and accretion for asset retirement  
8 obligations from rate base; these are matters that  
9 are not subject to a one size fits all approach and  
10 are better resolved on a case-by-case basis in  
11 rate proceedings. The Commission is of the  
12 view that utilities will have the opportunity to seek  
13 recovery of qualified costs for asset retirement  
14 obligations in individual rate proceedings. This  
15 rule should not be construed as pregranted  
16 authority for rate recovery in a rate  
17 proceeding."<sup>14</sup>

18  
19 **Q. Does FERC's Order require anything new or more with respect to its**  
20 **requirement for detailed depreciation studies?**

21 **A. No. FERC states:**

22  
23 "Finally this rule requires nothing new and  
24 nothing more with respect to the requirement for  
25 a detailed study. Complex depreciation and  
26 negative salvage studies are routinely filed or  
27 otherwise made available for review in rate  
28 proceedings. When utilities perform depreciation  
29 studies, a certain amount of detail is expected. It  
30 is incumbent upon the utility to provide sufficient  
31 detail to support depreciation rates, cost of  
32 removal, and salvage estimates in rates."<sup>45</sup> <sup>15</sup>

33  
34 And footnote 45 states:

35  
36 "When an electric utility files for a change in its  
37 jurisdictional rates, the Commission requires  
38 detailed studies in support of changes in annual

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<sup>14</sup> Id., Paragraph 64. (Emphasis added.)

<sup>15</sup> Id., paragraph 65. (Emphasis added.)

1 depreciation rates if they are different from  
2 those supporting the utility's prior approved  
3 jurisdictional rate."<sup>16</sup>  
4

5 Thus, FERC recognizes distinctions between legal and non-legal AROs just as  
6 SFAS No. 143 recognizes those distinctions. In fact, the amount resulting from  
7 Order No. 631's requirement to identify previous amounts collected for non-legal  
8 AROs should result in the same amounts as the SFAS No. 143 paragraph B73  
9 requirement to establish a regulatory liability to ratepayers. It is also clear, that  
10 on a going-forward basis, jurisdictional entities must be prepared to specifically  
11 identify and justify any non-legal AROs that they propose to include in rates.

12 **Q. What is the most important aspect of Order No. 631?**

13 A. The most important aspect of Order No. 631 is its requirement to separate or  
14 unbundle non-legal cost of removal allowances from depreciation rates, i.e., the  
15 separation principle.

16 **Q. How much prior collections are included in CVPS's accumulated**  
17 **depreciation account?**

18 A. As of December 31, 2003, CVPS had collected \$5.2 million in excess net  
19 salvage.

20 **Q. Do CVPS's depreciation rates include any additional future removal costs?**

21 A. Yes. CVPS's depreciation rates were originally designed to charge ratepayers  
22 about \$1.6 million per year for future removal costs, based on plant investment

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<sup>16</sup> Id., footnote 45.

1 as of December 31, 2000.<sup>17</sup> The Company would do this by bundling net salvage  
2 ratios in depreciation rates. This charge would continue to increase with plant  
3 balances, and has no doubt done so in the intervening years.

4 **Q. Do CVPS's rates comply with FERC Order No. 631?**

5 A. CVPS's rates do not comply with FERC Order No. 631. The removal costs  
6 recovered through depreciation rates are "non-legal AROs". Order No. 631  
7 requires that these be accounted for separately as specifically identifiable  
8 allowances within depreciation. Although I have estimated these amounts at the  
9 \$1.6 million level (based on 2000 plant balances), CVPS has not specifically  
10 identified proposed annual allowances. They are bundled into remaining life  
11 depreciation rates which further obfuscates their true identity and level.

12 **Q. What is your reaction to CVPS's filing?**

13 A. My reaction is that even though CVPS has implemented SFAS No. 143 and  
14 apparently Order No. 631, it is proposing to charge much more to its ratepayers  
15 for "non-legal" AROs than it would if it actually had legal obligations to remove  
16 these assets. Although SFAS No. 143 had not been implemented when Mr.  
17 Aikman calculated his depreciation rates, CVPS had implemented it before this  
18 filing. While the Company disclosed in its 10K Report that past excess cost of  
19 removal collections represent liabilities to ratepayers, it is silent on the matter in  
20 its filing. Furthermore, CVPS has not explained that these amounts are to be

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<sup>17</sup> Difference between CVPS's December 31, 2000 depreciation expense with and without net salvage ratios. See Exhibit\_\_\_\_(MJM-3), Statement C.

specifically identified in separate subaccounts of depreciation expense and accumulated depreciation.

**Q. Do you have any familiarity with these issues?**

A. Yes. I have been tracking the SFAS No. 143 and FERC Order No. 631 issues for several years, in fact almost from their inception. I have collected and reviewed the initial comments in the FASB's SFAS No. 143 deliberations, I also attended the FERC public meeting in its initial deliberations and I and my associate Mr. King assisted the National Association of State Utility Consumer Advocates ("NASUCA") in the preparation of its Comments filed in FERC Docket No. RM-02-7 which lead to its Order No. 631. I have also addressed these pronouncements in testimony and in public presentations.

**Net Salvage Estimates**

**Q. How much future net salvage is incorporated in the Company's depreciation request?**

A. Because the amount varies with changes in plant balances, it is difficult to determine the precise amount of net salvage. I estimate however, that there is a minimum of \$1.6 million of annual **negative** net salvage charges included in CVPS's overall depreciation request, based on plant investment as of December 31, 2000. This amount has no doubt grown since then.

**Q. How much actual net salvage has the Company been experiencing?**

A. Over the five years ending 2003 the Company has experienced \$0.5 million in **positive** net salvage on average.

1 **Q. What do you make of the level of cost of removal in CVPS's depreciation**  
2 **rates?**

3 A. The unreasonableness of CVPS's net salvage ratios can be demonstrated in  
4 many ways. The Company is proposing to charge ratepayers over \$1.6 million  
5 per year for a cost that averages a positive \$0.5 million per year. That is a  
6 substantial mismatch. If this Board were to accept such an excess charge, in my  
7 opinion GAAP, as I will explain later, and the SEC will require that it be reported  
8 as a regulatory liability. Recent activity of other utilities suggests that such  
9 amounts may even be transferred into income in certain circumstances.

10 **Q. Are you familiar with CVPS's approach?**

11 A. Yes. In certain other jurisdictions, utilities have used this approach. It is  
12 addressed in the NARUC's 1996 Public Utilities Depreciation Practices Manual.  
13 On the other hand, the same NARUC Manual also states:

14 "Some commissions have abandoned the  
15 above procedure [gross salvage and cost of  
16 removal reflected in depreciation rates] and  
17 moved to current-period accounting for gross  
18 salvage and/or cost of removal. In some  
19 jurisdictions gross salvage and cost of removal  
20 are accounted for as income and expense,  
21 respectively, when they are realized. Other  
22 jurisdictions consider only gross salvage in  
23 depreciation rates, with the cost of removal  
24 being expensed in the year incurred."<sup>18</sup>  
25

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<sup>18</sup> NARUC Manual, page 157.

1 The NARUC depreciation manual further opines on the underlying rationale for  
2 treating removal cost as a current-period expense, instead of incorporating it in  
3 depreciation rates:

4 “It is frequently the case that net salvage for a  
5 class of property is negative, that is, cost of  
6 removal exceeds gross salvage. This  
7 circumstance has increasingly become  
8 dominant over the past 20 to 30 years; in some  
9 cases negative net salvage even exceeds the  
10 original cost of plant. Today few utility plant  
11 categories experience positive net salvage; this  
12 means that most depreciation rates must be  
13 designed to recover more than the original cost  
14 of plant. The predominance of this  
15 circumstance is another reason why some  
16 utility commissions have switched to current-  
17 period accounting for gross salvage and,  
18 particularly, cost of removal.”<sup>19</sup>  
19

20 Setting aside ratemaking, one of the mechanical problems with this approach is  
21 that it can result in a depreciation reserve actually exceeding the gross plant  
22 balance. That is because, as I explained in the depreciation concepts section,  
23 the depreciation rate is excessive, that is it is more than necessary to fully  
24 depreciate the plant. Therefore, at the end of its life, the accumulated  
25 depreciation account exceeds the plant account balance. This is one of the  
26 reasons I believe that CVPS’s approach is inconsistent with fundamentals and  
27 principles of current practices regarding cost, capital recovery, and cost of  
28 removal. The accumulated depreciation and depreciation expense should be  
29 designed to recover the original costs, not something more.

1 **Recommended Net Salvage Allowance**

2 **Q. What do you recommend?**

3 A. First, since these are “non-legal” AROs, they must be accounted for as  
4 specifically identified allowances within depreciation expense and accumulated  
5 depreciation. In other words, they must be separated from other depreciation  
6 expenses.

7 **Q. How should these allowances be calculated?**

8 A. I recommend the Pennsylvania Public Utility Commission’s normalized net  
9 salvage allowance approach to determine the annual amount of the allowance.  
10 This is based on the average of the most recent 5 years worth of actual net  
11 salvage activity shown in CVPS’s FERC Form 1 reports. Net salvage is treated  
12 just as any other normalized expense, except that it is charged to accumulated  
13 depreciation. The Company is ensured full recovery of its annual costs, and  
14 ratepayers are not required to pay for estimated future inflation.

15 This approach has the added benefit that it is simple, straight-forward and  
16 easy to implement. It conforms to FERC Order No. 631 in that the net salvage  
17 allowance is a specifically identifiable amount that can be separately accounted  
18 for in depreciation expense and the accumulated depreciation account.  
19 Furthermore, it does not treat non-legal AROs as if they were legal AROs. Using  
20 the Company’s data as reported in their FERC Form 1 reports, the normalized

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<sup>19</sup> Id., page 158.

1 net salvage allowance amount would be positive \$0.5 million. This is because  
2 CVPS actually experiences positive net salvage on average.

3 **Q. How did you arrive at the positive \$0.5 million annual net salvage**  
4 **allowance?**

5 A. That is the average of the most recent 5-years worth of actual net salvage activity  
6 reported by the Company in their 1999 through 2003 FERC Form 1 reports<sup>20</sup>, as  
7 shown in Statement D of Exhibit\_\_\_\_(MJM-3). The positive \$0.5 million allowance  
8 is actually a normalized allowance.

9 **Q. Do you recommend reducing the Company's depreciation expense by its**  
10 **actual \$0.5 million positive net salvage experience?**

11 A. No, I do not. I recommend a zero ("\$0") net salvage allowance at this time. In  
12 my opinion, this is a reasonable transition from the CVPS's rates to the new  
13 depreciation paradigm.

14 **Q. Please summarize your net salvage recommendations.**

15 A. First , I recommend separation of non-legal AROs from depreciation as required  
16 by both GAAP and FERC rules. Second, CVPS' request to include cost of  
17 removal in the depreciation rates for its plant accounts should be rejected. The  
18 Company has already collected \$5.2 million for removal costs it has not  
19 incurred.<sup>21</sup> This resulted from the inclusion of inflated future net salvage ratios in  
20 prior depreciation rates, and it is actually experiencing positive net salvage.

---

<sup>20</sup> FERC Form 1 reports were used to get the most up-to-date information.

<sup>21</sup> CVPS December 31, 2003 10K Report.

As an initial transition, the net salvage allowance should be zero. This approach will separately identify such information to facilitate external reporting, regulatory analysis, and for rate setting purposes. My recommendation is consistent with paragraphs 36 and 38 of the FERC's Order No. 631 in its Docket No. RM02-7-000, issued April 9, 2003.

**Q. What significant numbers are involved in the net salvage issue?**

A. There are four significant numbers. The first is the \$5.2 million of net salvage that CVPS has already charged to customers. The second is the amount of inflated estimated future cost of removal bundled in CVPS's depreciation rates for all functions, i.e., including production. The third is its actual recent net salvage experience and the fourth is my recommended zero ("0") allowance. These amounts are listed below:

**Table 6**

<u>Net Salvage Amounts</u>	<u>Annual Amount</u>
Regulatory Liability Included in Depreciation Reserve	\$5.2 million
Additional Annual Amount	\$1.6 million
Actual Recent Experience	\$0.5 million (positive)
Majoros Recommendation	\$0.0

The Board can use these four numbers to judge the reasonableness of any specific identifiable annual allowance it grants to the Company. In my opinion, the allowance should be \$0. To grant the Company's \$1.6 million would be tantamount to providing CVPS with at least \$1.6 million of additional before-tax income each year.

1 **Q. Do you have any empirical evidence that would suggest that amounts such**  
2 **as these are tantamount to providing additional pre-tax income?**

3 A. Yes. While it was still regulated, the telephone industry collected substantial  
4 amounts of future cost of removal through depreciation, just as CVPS is  
5 proposing here. Upon deregulation and the adoption of SFAS No. 143, the major  
6 telephone companies took \$11.5 billion from accumulated depreciation into net  
7 income.<sup>22</sup> This is a monumental intergenerational inequity.

8 **Q. How about the electric industry?**

9 A. I do not yet have all the details, but I do know that at least one major electric  
10 utility, American Electric Power, which had several of its Production plants  
11 deregulated, immediately took \$473 million from accumulated depreciation and  
12 transferred it into income relating to those deregulated plants, another  
13 monumental intergenerational inequity.<sup>23</sup>

14 **Q. Does the 5-year average allowance approach you are recommending result**  
15 **in the abandonment of accrual accounting?**

16 A. No. Accrual accounting is the recognition of revenue when earned and expenses  
17 when incurred. SFAS No. 143 and Order No. 631 preclude recording AROs for  
18 non-legal retirements because there is no legal obligation to incur such costs.  
19 CVPS is attempting to accrue an expense for which it has no liability. Consider  
20 that GAAP is founded upon accrual accounting, and SFAS No. 143 is GAAP.

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<sup>22</sup> Pre-tax gains of SBC (\$5.9 billion), Verizon (\$3.5 billion), Qwest (\$0.4 billion), BellSouth (\$1.3 billion) and Sprint (\$0.4 billion). See Companies' 2003 10K Reports and 2003 Annual Reports to Shareholders.

1   **Q.    Have you made any similar recommendations in other proceedings?**

2    A.    Yes, in two recent cases the New Jersey Board of Public Utilities endorsed my  
3       testimony regarding SFAS No. 143. For example, in a recent case involving  
4       Rockland Electric Company, I represented the New Jersey Ratepayer Advocate.  
5       My position was that the intellectual foundation of SFAS No. 143 supported  
6       unbundled depreciation rates, just as I am recommending here. Staff concurred  
7       and both the Administrative Law Judge and the Board adopted my position. In a  
8       separate Jersey Central Power & Light Company proceeding, both Staff and the  
9       Board also adopted my position. Exhibit\_\_\_\_(MJM-4) contains relevant extracts  
10      from the Orders and rulings in those proceedings.

11   **Q.    Have any other states adopted a 5-year net salvage allowance approach?**

12   A.    Yes. As I stated earlier, the 5-year rolling net salvage allowance approach is  
13      used by the Pennsylvania Public Utility Commission.<sup>24</sup> The net salvage  
14      allowance approach ensures that the Company recovers the net present value of  
15      its actual cost, but eliminates the inclusion of future inflation in depreciation rates.

16   **Q.    Does this conclude your discussion of net salvage?**

17   A.    Yes, I will now discuss life studies.

18   **Life Study Methods**

19   **Q.    Please describe life analysis and life estimation.**

---

<sup>23</sup> See AEP 2003 Annual Report to Shareholders.

<sup>24</sup> See Penn Sheraton et. al. v. Pennsylvania Public Utility Commission, 198 Pa. Super. 618, 184 A. 2d. 234 (1962).

1 A. Life analysis is the process of estimating how long plant has lived in the past.  
2 Life estimation is the process of estimating how long the existing plant will live in  
3 the future. Mr. Aikman used three basic methods of life analysis in the  
4 Depreciation Study. He used the life span method for the Production plant  
5 functions. He also used the retirement rate method for these functions, but, as  
6 will be explained below this was only to analyze interim activity. Mr. Aikman did  
7 not have the necessary data to perform retirement rate analyses on the  
8 Transmission, Distribution and General accounts. For those functions he used  
9 the Simulated Plant Record Balances (“SPR”) method. In addition to some of  
10 these methods, I have also used the Geometric Mean Turnover Method (“GMT”)   
11 for my study.

12 **Q. What is the life span method?**

13 A. The life span method is based on the premise that all plant within a property  
14 group will retire concurrently a specific number of years after the initial  
15 placement. There may be interim additions and retirements; however, all plant is  
16 assumed to be subject to a “final retirement.”

17 **Q. What is the retirement rate method?**

18 A. The retirement rate method is an actuarial technique used to study plant lives,  
19 much like the actuarial techniques used in the insurance industry to study human  
20 lives. It requires a record of the dates of placement (birth) and retirement (death)  
21 for each asset unit studied. It is the most sophisticated of the statistical life  
22 analysis methods in that it relies on the most refined level of data. Aged

1 retirements and exposures data from a company's records are used to construct  
2 observed life tables ("OLT"). These are then smoothed and extended by fitting,  
3 using least-squares analysis, to a family of 31 predefined survivor curves ("Iowa  
4 Curves") using varying life assumptions. The process continues until a best fit  
5 life is found for each curve. Numerous interactive calculations are required for a  
6 retirement rate analysis.

7 **Q. What is the Simulated Plant Record Balances method?**

8 A. The Simulated Plant Record ("SPR") Balances method, commonly referred to as  
9 a semi-actuarial method, is a statistical technique that is used when aged  
10 retirement and exposure data is not available. The SPR Balances method  
11 requires a less refined record of annual plant additions, balances and retirements  
12 than a true actuarial rate method such as the retirement-rate method. Although  
13 the SPR Balances method uses the same Iowa Curves as the retirement-rate  
14 method, they are applied differently to obtain a best-fit result, using least-squares  
15 analysis.

16 **Q. What is an Iowa curve?**

17 A. An Iowa curve is a surrogate or standardized OLT based on a specific pattern of  
18 retirements around an average service life. The Iowa curves were devised over  
19 60 years ago at what is now Iowa State University. They provide a set of  
20 standard patterns of retirement dispersion. Retirement dispersion merely  
21 recognizes that accounts are comprised of individual assets or units having  
22 different lives. Retirement dispersion is the scattering of retirements by age for

1 the individual assets around the average service life for the entire group assets.  
2 If one thinks in terms of a “bell shaped” curve, dispersion represents the  
3 scattering of events around the average.

4 There are left-skewed, symmetrical and right-skewed curves known,  
5 respectively, as the “L curves,” “S curves” and “R curves.”<sup>25</sup> A number identifies  
6 the range of dispersion. A low number represents a wide pattern and high  
7 number a narrow pattern. The combination of one letter and one number defines  
8 a dispersion pattern. The combination of an average service life with an Iowa  
9 curve provides a survivor curve depicting how a group of assets will survive, or  
10 conversely be retired, over the average service life.

11 **Q. Can you provide an example of an Iowa curve?**

12 A. Yes. The following table contains a 5 S0 and 10 S0 life and curve. I have  
13 included two combinations to demonstrate that these curves can be calculated  
14 with various alternative life assumptions. The percent surviving represents the  
15 amount surviving at each age interval shown in the first column. Notice that the 5  
16 S0 life and curve sums to the 5 year average service life which would be used in  
17 the depreciation calculations and the 10 S0 life and curve sums to a 10 year  
18 average service life.

19  

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<sup>25</sup> There is also a set of Origin Modal (“O”) curves which are essentially negative exponential curves.

**Table 7**

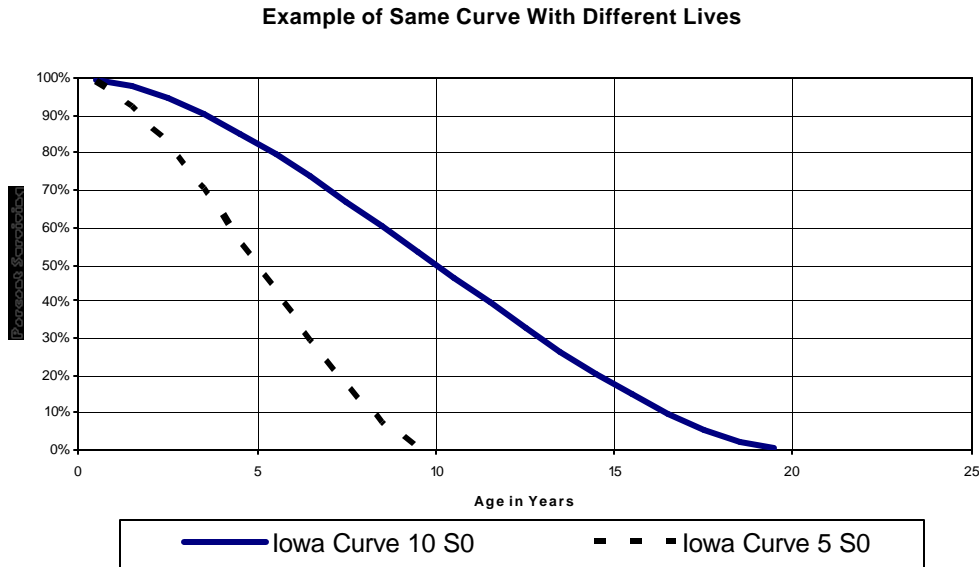
<b><u>Age</u></b>	<b><u>Survivor Curves</u></b>	
	<b>5 S0</b>	<b>10 S0</b>
	<b><u>Percent</u></b> <b><u>Surviving</u></b>	<b><u>Percent</u></b> <b><u>Surviving</u></b>
0.5	0.99	1.00
1.5	0.92	0.98
2.5	0.83	0.94
3.5	0.70	0.90
4.5	0.57	0.85
5.5	0.43	0.80
6.5	0.30	0.74
7.5	0.17	0.67
8.5	0.08	0.60
9.5	0.01	0.53
10.5		0.47
11.5		0.40
12.5		0.33
13.5		0.26
14.5		0.20
15.5		0.15
16.5		0.10
17.5		0.06
18.5		0.02
19.5		<u>0.00</u>
<b>Total</b>	<b>5.00</b>	<b>10.00</b>

**Q. Why do you call tables of numbers, such as the ones above, curves?**

A. Because when they are plotted on charts with the x-axis representing “age” and the y-axis representing “percent surviving” they appear as curves as shown below:

1

**Table 8**



2

3

4 **Q. What is the Geometric Mean Turnover method?**

5 A. The Geometric Mean Turnover Method (“GMT”) is one of the turnover methods

6 of life analysis. Turnover methods provide an indication of the average life of the

7 property.<sup>26</sup> Turnover methods may be used to study retirements in relation to

8 plant balances irrespective of the age of the property retired.<sup>27</sup> Turnover

9 methods use annual additions, retirements and plant balances. The GMT

10 method is based on ratios of annual additions and retirements to plant balances

11 and is useful in detecting trends. The life estimate is the reciprocal of the

12 geometric mean of the additions and retirements ratios averaged over a period of

<sup>26</sup> National Association of Regulatory Utility Commissioners, Public Utility Depreciation Practices, August 1996 (“NARUC Depreciation Manual”), p. 81.

<sup>27</sup> Id.

1 years.<sup>28</sup> Because turnover methods assume uniform retirement dispersions, the  
2 results of turnover analyses focus on the fundamental life statistic,  
3 unencumbered by 31 possible Iowa curve retirement dispersion estimates.  
4 Given sufficient data, this makes the GMT method particularly useful in detecting  
5 trends. I used GMT studies to test and corroborate where possible the results of  
6 my SPR studies. I also used the GMT studies to detect trends in the data.

7 **CVPS's Production Plant Life Span Depreciation Rate Calculations**

8 **Q. Do you agree with the use of the life span method in the Production plant**  
9 **depreciation rate calculations?**

10 A. I neither agree with nor disagree with the use of the life span method in this  
11 proceeding. I do not have enough information to challenge this method or the  
12 terminal retirement years used.

13 **Transmission, Distribution and General Functions**

14 **Q. How did Mr. Aikman determine his estimated service lives for these**  
15 **functions?**

16 A. Mr. Aikman used the semi-actuarial SPR approach to study plant history in the  
17 Transmission, Distribution and General ("T, D & G") functions. Although it  
18 appears that the data necessary to conduct actuarial retirement rate analyses  
19 might have been available, CVPS determined that "the collection of the  
20 necessary 10 to 20 years of vintaged retirements to complete the actuarial data  
21 base would have required undue manpower input and would not have been cost

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<sup>28</sup> Id., p. 91.

effective; therefore, for historical analysis of mass plant (T, D, G) we employed  
SPR historical life analysis methods.”<sup>29</sup>

**Snavelly King Life Analysis Approach for T, D & G Functions**

**Q. What was your approach to analyzing CVPS’s lives and curves in the T, D & G functions?**

A. I began by reviewing Mr. Aikman’s studies. I also reviewed the Company’s responses to data requests to see if I could glean any additional information that would impact my analysis. I then analyzed each account using the SPR Balances and GMT methods. Based on my analyses, I conclude that several of CVPS’s lives are too short. I am not, however, recommending longer lives at this time. Hopefully the Board will require regular depreciation studies in the future and more appropriate lives will be adopted over time.

**Depreciation Study Technical Update**

**Q. Did you attempt to update CVPS’s Depreciation Study to include plant activity as of December 31, 2003?**

A. Yes, I did. Originally I had planned to perform a Technical Update on CVPS’s study. I had planned to calculate new remaining lives based on his life and curve estimates and plant investment as of December 31, 2003.

**Q. Were you able to perform such an update?**

A. No. While I had the necessary data to update the Transmission, Distribution and General functions, I did not have plant data by Plant in order to update the

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<sup>29</sup> Depreciation Study, page 21.

Hydraulic and Other Production functions. The data provided by CVPS for the years 2001, 2002 and 2003 was from the FERC Form 1 reports and was not broken out by Plant Units.<sup>30</sup> Because I was unable to update all functions, I have chosen not to conduct the Technical Update.

**Summary**

**Q. Please summarize your recommendations.**

A. My recommendations are individually discussed in my testimony above and in my exhibits.

- I have removed net salvage as a component of the Company's proposed depreciation rates.
- I have identified and recommended a specific net salvage allowance in conformance with FERC Order No. 631, based on a five-year average of actual experience. Because CVPS has averaged positive net salvage during this period, I have recommended a \$0 annual net cost of removal allowance.

My recommendations result in a \$13.3 million depreciation and net salvage expense accrual for the Rate Year.<sup>31</sup> This is \$1.8 million less than Ms. Gibson proposes.<sup>32</sup>

**Q. Does this conclude your testimony?**

A. Yes, it does.

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<sup>30</sup> Response to Data Request No. 6-18.

<sup>31</sup> Exhibit\_\_\_\_(MJM-3), Statement A.

<sup>32</sup> Id.